



Volume 24

An ARCEC Monthly Publication

September 2015

Counterpoise Editor - Sue Robins AF6LJ

2015 ARCEC Club Picnic

On September 19th ARCEC members came together for the 2015 annual club picnic. The weather couldn't have been much better for the occasion, a light breeze and temps in the eighty degree range made for a picture perfect day. Around 9:45 AM club members began to show up with all manner of tasty food items, There was plenty to eat and it wasn't long before Club President Dave KD6DW fired up the BBQ grills and before long burgers, chicken, hot dogs, and other goodies were on the grill. We all had a great time good food, good conversation with our friends. Pat WA6MHZ brought his ultimate Go Kit and used it to work some DX.

For some members this became a busy day as the ARRL Simulated Emergency Test began at 1:00 PM, a few of the members went off to engage in emergency communication practice activities. The picnic was fun, time blew by like a Santa Anna wind and before we knew it it was



time to pack up and head off to whatever each of us had planned for the rest of the day. Another great ARCEC Club Picnic in the history books.

San Diego Hamfest 2015

The Lakeside Amateur Club is putting on San Diego Hamfest 2015 to be held at the Lakeside Rodeo Grounds on October 3rd for more details see [www. Sdhamfest.org](http://www.Sdhamfest.org)

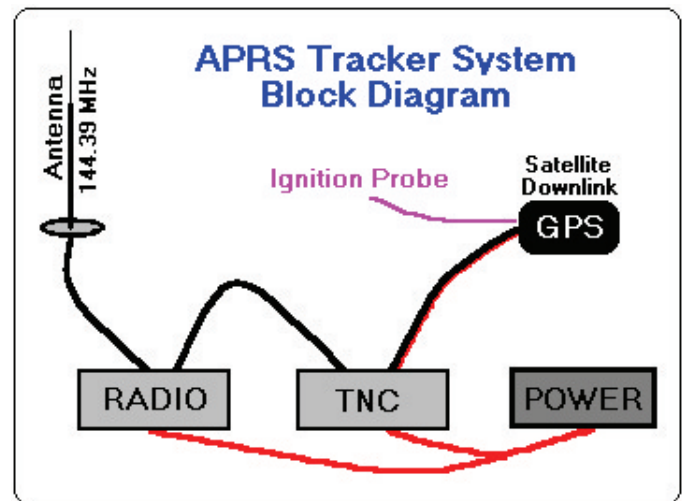
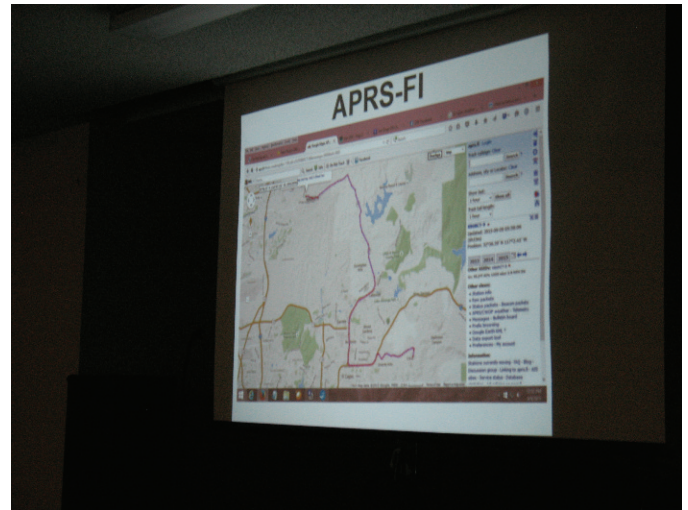


September Meeting Highlights

Our September meeting was well attended, the topic of the presentation was APRS, Pat WA6MHZ put on a very informative presentation on APRS. The Automatic Packet Reporting System is a system that allows for the transmission of digital messages in real time. These messages can be real time weather information from weather stations, other data types, and real time position information. For most of us APRS is used to track vehicle or people movements. APRS is especially useful in search and rescue where searchers can do more searching and less position reporting. In other words; if it moves and can have a GPS receiver attached to it it can be tracked using APRS.

Pat's presentation took club members through how APRS works, what is needed to build one and things to be aware of when buying hardware. Pat then walked attendees through the evolution of his own APRS system used in his mobile installation, including some of the problems encountered and environmental issues. Pat put on a great presentation giving club attendees a taste of what APRS is, and what it can do.

For more information see; <http://www.aprs.org/>
And
[s://en.wikipedia.org/wiki/Automatic_Packet_Reporting_System](http://en.wikipedia.org/wiki/Automatic_Packet_Reporting_System)



ARCEC Repeater Frequencies

2 Meter Repeater	220 MHz Repeater	440 MHz Repeater
TX 146.475	TX 222.480	TX 440.900
RX 147.420	RX 224.080	RX 445.900
Offset .945	Offset 1.6	Offset 5.00
PL 107.2	PL 107.2	PL 107.2



Off Grid Solar Power

By Joe Bennett – W6VMX

I have been using small scale solar power systems for a while now. They are great for field day use, or just about any time you may have the need to operate a station when you are out and about on a remote site. In the past, I had created a portable power system I had named "The Cart". It was detailed a while back here in the Counterpoise in both the February 2013 and March 2013 issues if you are interested. Back issues can be located either at the ARCEC website (@ www.wa6bgs.us) or at the archive site where the issues I created when I was a past Editor of the Counterpoise can be located too (@ www.arcecnewsletter.com).

You can also use an off grid system to power your equipment during an emergency situation at home too. Any number of natural and made-made events can cause the loss of commercial power, and totally shut down your operations until power is restored. Creating an off grid system will allow you to operate for long periods of time while other power sources may no longer be providing power in other ways. While there are a number of other alternatives for providing power, solar has some distinct advantages that should be considered when deciding how you might set up an emergency power source. Once set up, a properly designed off grid solar system is self renewing and requires little in the way of maintenance or attendance to operate for long periods of time.

To create a viable system, you need several components that will act together to provide the power source you would need. Solar panels are one of the major components, and they come in a number of sizes and types, and of course prices too. Batteries to store generated power, and these come in various sizes, types, and costs as well. A good solar controller to allow the solar panels to actually charge your batteries in a predictable and controllable manner. Other components, such as inverters and power conditioners can be added to more fully tailor your installation to your end needs.

What do you actually want an off grid solar system to provide power to, and for how long? A properly designed system can be used continuously to power a radio station from the sun. It can also be

designed to provide a limited amount of power for lighting, small fans, and even some small appliances too. I have drawn and made available a design that if properly sized, could provide power for a home station, or a remote repeater site, and at a pretty reasonable cost too. By choosing and adjusting the sizes of panels, controller, and batteries, you can create one that can power even a moderately sized station in the event of power loss.

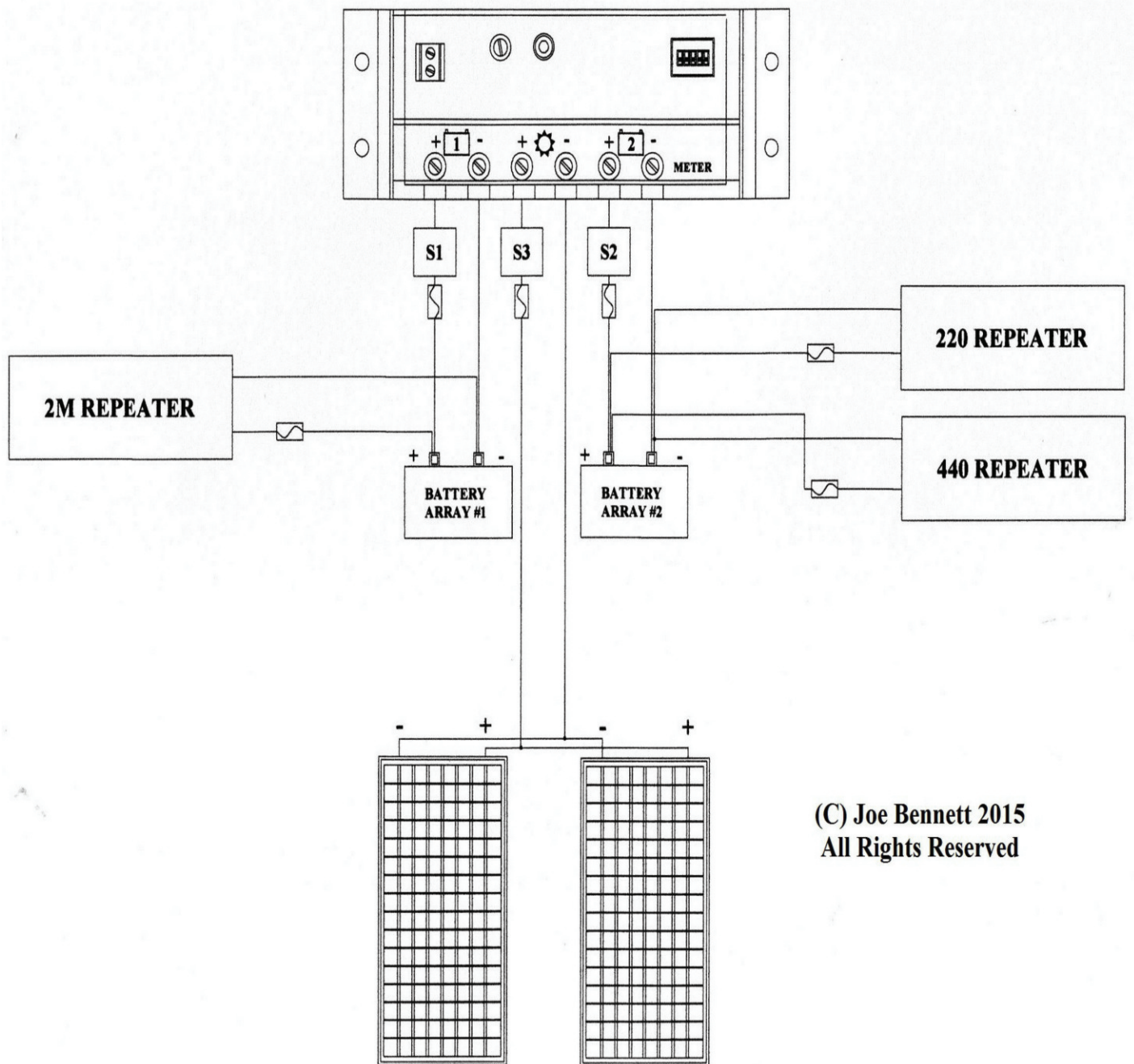
The accompanying drawing was designed as a possible solution for powering the Crest ARCEC repeater site totally off grid if desired, or with some additional equipment and modifications it could be made to work in conjunction with the existing power that is available at that location. See the drawing for more details.

If there is any further interest, I would be happy to write another article for the Counterpoise detailing more about how to calculate loads, solar panel sizes, battery capacities, and more. Just contact the Counterpoise Editor and request another installment.

Editor's Note; See the drawing on page 4 for details of the off grid solar power system.

From Our Picnic





Material List and Approximate

Component Name	Quantity	Approximate cost
Solar Controller	1	\$135.00
Solar Panel (~160 watts)	2	\$460.00 (\$230X2)
AGM Battery (~100+ah)	2	\$500.00 (\$250X2)
30A 12vdc rated switch	3	\$60.00 (\$20X3)
Fuses & Holders	6	\$120.00 (\$15X6)
Misc. wire & mountings	Various	Depends on final installation
Approximate Total		\$1400.00

These costs WILL vary depending on source used and are only provided as an example.

The San Diego Morse Code Practice Group

Mark Wardwell KB6PJU has been running a code practice group on the WA6BGS VHF and UHF repeaters. The repeaters are linked to accommodate the needs and accessibility of all who wish to participate. The code practice Group meets at 7:00 PM Pacific time on Tuesdays, Thursdays, and Saturdays.

More Picnic Goodness



Club Shirts & Jackets

We have 2013 club shirts and jackets available at meetings. Shirts are available sizes from small to XX large, this year's shirt has a pocket and as usual is green in color with the club logo in white. The cost is \$12.00 each. You can get a 2013 Field Day shirt or the standard club shirt, both styles of shirts have the club logo on the back and the left side.

Jackets are also available in sizes ranging from Medium to XX large. These are of the lined windbreaker style, with side pockets and they snap down the front. The cost is \$24.00 each.

We also have a number of shirts from 2012, these shirts are identical to the 2013 shirts without the pocket, and they are available in both the standard club shirt and the 2012 Field Day shirt. Sizes are limited to stock on hand.

If you have something you would like to see in Counterpoise send that content to counterpoise@wa6bgs.us You are what makes the Amateur Radio Club of El Cajon, we wouldn't exist without you the membership. Join us at our meetings and activities and become a part of the club.



See You October 8th

Latest Swap Meet Listings

See [URL: http://wa6bgs.us/swapmeetlegal.html](http://wa6bgs.us/swapmeetlegal.html) for more listings and posting guidelines..

For Sale

I am asking \$25 or best offer for the whole package. I will also consider a trade - I don't have anything in mind but please offer. While the manual says Parallel or SCSI, I don't know if or how SCSI would work. However, the parallel port works just fine. I last used it on an XP machine and all I did was plug in the drive, turn it on and it showed up as a drive. I did this recently to move off any data I wanted to keep and to format the disk and everything worked perfectly. I previously used the drive on an NT machine which did require that software be installed. Newer versions of windows I don't know about. It is supposed to work on a Mac but I have never tried it so... I hate to see working hardware go to recycling, especially if it may of use to someone.

What is included:

100 Megabyte Zip drive with power and data cables

Twenty one 100 Megabyte disks

Manuals and software

Contact info: Jerry Vaughn at kk6qhz@arrl.net



Rigblaster Pro model #58002-953. Bought but never used, like new condition. Includes all cables and DVD of software (see photos). Original retail price was \$299.95, current retail price is \$269.95, and my asking price is \$150.00 . For more details or to arrange for purchase, please contact Joe Bennett at w6vmx@rocketmail.com .

Wanted

Russ-KK6QWO - I'm a new ham and don't have anything except a HT. I'm looking for a power supply for my Kenwood base, a power cord and a 4 pin mic, not to mention a 2M mobile and antenna. Contact me at russell.wise@navy.mil.



Joe - W6VMX - I am looking for a Kenwood TM-621A (or a TM-721A too) dual band VHF/UHF mobile transceiver for parts only. Does not need to be working, just looking to use it to replace parts on another unit. If you have one you want to sell or donate, please contact me via my email at w6vmx@rocketmail.com to make arrangements with me. Thanks.





The **AMATEUR RADIO CLUB OF EL CAJON**^{Inc.}
WA6BGS

Post Office Box Fifty, El Cajon California 92022

Founded 1960 ~ Incorporated 1976

Please fill out this form and then see options at bottom for submitting to the club

Date of application: ___ / ___ / ___

Amount Paid: \$ _____ Cash Check Check # _____

Membership Type: Individual (\$20/year) Family* (\$35/year)

Membership Status: New Renewal Returning Member

Call Sign First Name _____ Last Name _____

If a previous member, what was your WAMO number?

ARRL Member: Yes No

License Class: Technician General Extra Other

Email Address (required) _____

Phone Number (optional) _____

**Use another sheet of paper to add Family members and please include the following information:*

First Name, Last Name, Call Sign (if any), License Class, Wamo Number (if any), & Email Address.

Submitting this form:

To submit this form, you can mail it to:

**Amateur Radio Club of El Cajon
P.O. Box 50
El Cajon, CA 92022**

-OR-

Bring it to the next club meeting on the second Thursday of each month. You can find the date and location by getting online at www.wa6bgs.us which is the club website. Check it out for the most current information regarding the club.

Cash Payments - Get a receipt from the Club Treasurer. Please make all checks payable to AMATEUR RADIO CLUB of EL CAJON, Incorporated. Receipts for payments by check will be sent by email or regular mail by the Club Treasurer.

Members with an FCC Call Sign are full members with voting privileges. Members without an FCC Call Sign are Associate members without voting privileges.

YOUR DUES ARE TAX DEDUCTIBLE: Amateur Radio Club of El Cajon, Inc. Is a 501 C 7 Corporation. Donations are NOT tax deductible.

Email address and phone number are to allow club officers to contact members regarding club business and information of interest.